# MAXWELL JONES

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## EDUCATION

**Carnegie Mellon University**, Pittsburgh, PA **Expected Graduation*: May 2023***
Bachelor of Science in Artificial Intelligence GPA: 4.0/4.0
Additional Major in Mathematics

**Thomas Jefferson High School for Science and Technology**, Alexandria, VA ***2015-2019***
High School Diploma GPA: 4.1/5.0

## PROJECTS

**MIT BattleCode** ***January 2021***

- Worked on team of 4, coding an AI bot in java to compete in a tournament run every year by MIT.
- Leveraged distributed communication algorithms and pathfinding to increase bot's effectiveness.
- Placed 9th out of over 250 teams internationally, 1st out of all first-time teams.

**Walksafe | CMU TartanHacks** ***February 2020***

- Developed a Python program on team of 4 that calculates safe and efficient walking paths at night in New York City.
- Created a weighted graph from crime and street data and implemented an A* algorithm to generate optimal paths.
- Integrated Open Street Map API and fetched data from NYPD crime database REST endpoint.

**Origami Social Network** ***August 2018-May 2019***

- Developed a Node.js application that allows origamists to connect with each other and share their work
- Implemented user accounts, used MD5 hashing to safely store passwords, added cookies to store login data.

## EXPERIENCE

**SWE/ML Intern | *Facebook*** ***Summer 2021***

- Developed a data perturbation training/evaluating/testing pipeline for the Probability: Uncertainty team.
- Designed and tested probabilistic pytorch models to analyze out of distribution data recognition.
- Specifically focused on MNIST and FashionMNIST datasets, comparing different model architectures

**Data Science Intern | *Fiat Chrysler Automobiles*** ***Summer 2020***

- Optimized the HR absentee prediction model in Python resulting in a 2% increase in accuracy.
- Improved neural network performance by cross referencing crew attendance across plants.
- Queried data from PostgreSQL database and used Pandas dataframe library to store query results.

**(Lead) Teaching Assistant | *Multiple Courses*** ***Fall 2020, Spring 2021, Fall 2021***

- 15-251 Theoretical Ideas in Computer Science, Lead TA 15-151 Discrete Math.
- Design/Lead staff meetings, coordinate TA-Professor interactions, delegate TA responsibilities for Discrete math.
- Teach 20-student recitation twice per week as well as helping and creating course content.
- Host weekly office hours, grade homework and exams, and attend weekly staff meetings.

## SKILLS

**Programming**: Python | Java | C | SQL | Julia | JavaScript | HTML | Latex

**Tools/Frameworks**: Sklearn | Keras | NumPy|Pytorch | Jupyter Notebook | Pandas | Git | Unix Command Line

**Coursework**: 15-281 Artificial Intelligence | 10-315 Machine Learning | 15-213 Computer Systems | 15-251 Great Theoretical Ideas in Computer Science | 15-122 Principles of Imperative Computation | 21-325 Probability Theory | 21-260 Differential Equations | 15-151 Concepts in Mathematics | 21-484 Graph Theory.

## INVOLVEMENT

Treasurer for CMU's Black Student Union, Origami Club Officer, Club Basketball, Kappa Sigma Fraternity.